

Surgical outcome of pterygium with bare sclera technique and conjunctival autograft technique



Ophthalmology

KEYWORDS: : pterygium, bare sclera technique(BST), conjunctival autograft technique(CAT)

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ABSTRACT

Background and objectives: Primary pterygium is one of the most common disorders seen in our community because the inhabitants have a high exposure to ultraviolet light. But recurrence after excision of pterygium is a common problem and various techniques have been used to reduce its recurrence rates. This study was undertaken to compare the surgical outcome after pterygium excision with bare sclera technique and conjunctival limbal autograft. **Methods:** A prospective study was done which included 41 patients who attended the OPD during the study period. They were randomly assigned into the following 1 group of 21 eyes and other group of 20 eyes, group A(bare sclera excision) and group B(conjunctival limbal autograft) and surgeries were done in Government general hospital, Siddhartha Medical Sciences during June 2014 to December 2014. All patients were followed up on post operative day 1, day 7, 1 month for recurrence and graft complications. To make a comparative study of pterygium management in order to evaluate the methods of effective management and prevention of recurrence of pterygium and complications. **Results :** In our study, which included 41 patients, there were four cases of recurrence after the pterygium excision and conjunctival autograft surgery. **Interpretation & Conclusion:** Conjunctival autografting is a safe and effective procedure in the management of pterygium. The recurrence rate following limbal conjunctival autografting is significantly lower than that following primary conjunctival closure.

INTRODUCTION:

Pterygia, the wing shaped fleshy growth on corneal limbus. Pterygium is most common on nasal side and has a genetic predisposition. Surgical excision remains the principle mode of treatment for pterygium. Various techniques have been tried like simple excision, Bare sclera method, conjunctival autograft and Ionizing radiation, heat, laser, antimetabolites have been advocated as adjuncts to surgery. Many of these techniques have either been unsuccessful or associated with serious complications.

AIMS AND OBJECTIVES:

The purpose of this study is to investigate the rate of post operative recurrence of pterygium after resection using pterygium excision and conjunctival autograft technique.

MATERIALS AND METHODS:

This study is a prospective randomized clinical trial to compare the postoperative complication rate of pterygium after resection using Bare Sclera Excision Technique and Conjunctival Autograft Technique, and was conducted in Government general hospital, Siddhartha Medical Sciences during June 2014 to December 2014 and 41 eyes were operated for same. The inclusion criteria 1. primary (progressive) pterygium 2. pterygium encroaching cornea by more than 2mm 3. patients willing for surgical excision. The exclusion criteria includes 1. Recurrent pterygium 2. pseudopterygium 3. patients with follow up less than 3 months 4. patients with coexistent diseases like previous alkali burns, Mooren's ulcer, etc which predispose to pseudopterygium 5. History of any autoimmune systemic disease condition associated with poor wound healing patients with other significant ocular pathology. The statistical significance of difference in recurrence rate was evaluated by using Chi-square Test.

RESULTS:

In the study 98% of patients with pterygium are in the age group of 20-60 years (table 1). In the study more number of female patients (51%) are noted than male (49%) (Table 2). Most of patients presented with fleshy growth and foreign body sensation. From the observation, it was noted that 81% of the cases were employed in outdoor work (Table 4). Of 46% cases of 'Recurrence' in the study, 42% were with bare sclera technique and 4% with conjunctival autograft (Table 5).

AGE DISTRIBUTION (TABLE 1)

Age	BST	CAG
10-20	-	-
21-30	-	13
31-40	1	6
41-50	6	1
51-60	13	0
61-70	-	-
>70	-	-

GENDER DISTRIBUTION (TABLE 2)

	Male	Female
Bare sclera technique	7	13
Conjunctival autograft	13	8
Percentage	48.7	51.2

OCCUPATIONAL INCIDENCE OF PTERYGIUM (TABLE 4)

Occupation	No. of patients	Percentage (%)
Outdoor	33	81%
Indoor	8	19%

RECURRENCES (Table 5)

	No. of Cases	Percentage
BST	8	42%
CONJ GRAFT	1	4%

Chi-Square = 18.8; d.f = 1; p < 0.001
Statistically very highly Significant

DISCUSSION

1. AGE DISTRIBUTION (Table 1): In the study 98% of patients with pterygium are in the age group of 20-60 years. This compares well with other authors like Cameron, Dr. Gnana Murthy and H. Shah in their survey in north India, who state that about 80% of pterygium

cases are in the age group of 21-50 years.

Author	% of pt.s in 20-50 age group
Gnana murthy & H.Shah	96%
Present study	98%

2. GENDER DISTRIBUTION(table2): In the study more no. of female patients(59%) are noted than male(41%). But, Pterygium is more often seen in men than women as 53.9% reported by Fernandes M., Sangwan VS, Bansal AK et al.

Author	% of Males	% Of Females
Fernandes M,sangwan VS(2005) ²	53.9%	46.1%
Present study	59%	41%

3.OCCUPATIONAL INCIDENCE(Table 4):From the observation, it was noted that 81% of the cases were employed in outdoor work. This fact is well supported by several authors, like Mc.Reynolds, Hillgers, Anderson, and Kerkenezov.

Author	% of pts working outdoor
<i>Anderson</i>	81%
Present study	81%

4.RECURRENCE(Table 5):Of 46% cases of 'Recurrence' in the study, 42% were with bare sclera technique which is better than the rate of 82% with bare sclera reported by *Scheffer Tseng*, MD and 4% with conjunctival autograft which is better than the rate of 31.3% with conjunctival autograft reported by Fernandes.M

Author	Recurrence with Bare sclera Technique
<i>Scheffer Tseng(2002)</i>	82%
<i>Kaya M , Tunc M et al(2003)</i>	40%
<i>Fernandes.M.,SangwanVS,Bansal(2005)²</i>	33%
Present study	42%

Author	Recurrence with free conjunctival autograft
<i>Koranyi G, Seregard S et al.(2004)³</i>	13.5%
<i>Fernandes.M.,SangwanVS,Bansal(2005)²</i>	31.3%
<i>Riordan-Eva et al</i>	14%
Present study	4%

CONCLUSION:

The recurrence of pterygium is less with conjunctival autograft technique when compared to bare sclera technique. Conjunctival autografting is a safe and effective procedure in the management of pterygium.

References

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